As long as progress is being made in any field, and new strategies, knowledge, and insights are being developed, there must always be a gap between the theoretical or knowledge base and practices. However, the gap between what is known about how best to support the growth, development, and learning of young children and the nature of actual typical practices involved in their care and education is tragically large. Noting that the major challenge to the early childhood profession is how this gap might be reduced, this paper examines briefly six major issues confronting the early childhood field. These issues are: (1) the lasting effects of early experience; (2) the critical period of neurological development; (3) regardless of children's early experience, all children come to school with lively minds, with an inborn disposition to make sense of their experiences, observations, and feelings; (4) the critical period in social development; (5) the development of communicative competence; and (6) development and cultural identity. Having distinguished between academic and intellectual goals and activities, the paper concludes by suggesting that the best way to ensure good quality educational environments in which all children can develop and learn is by focusing collective and individual teacher and teacher educator energies on the quality of day-to-day interactions with children so that these interactions are rich, interesting, engaging, satisfying, and meaningful. (Contains 13 references.) (HTH)

Lilian G. Katz

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State of the Art of Early Childhood Education - 2003

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A state-of-the-art report is intended to indicate the most recent, up-to-date or advanced practices of the "art" in question. It usually refers to the state-of-the art of professional practice. Such reports also typically refer to the state of the art's understandings, concepts, and agreed upon warranted assumptions.

The actual state-of-the-art of practice in the field of early childhood education illustrates only too well the general principle that there is usually a gap between what we know and what we do, between the best available knowledge and understandings, and the typical practice in the 'art' or profession in question. As long as progress is being made in any field, and new strategies, knowledge and insights are being developed, there must always be a gap between the theoretical or knowledge base and practices of the art itself.

However, the gap between what we know about how best to support the growth, development and learning of young children and the nature of actual typical practices involved in their care and education - parenting, caretaking, early childhood education -- is tragically large. A major challenge to the profession is how this gap might be reduced.

In addressing this challenge, six major issues in the field are addressed briefly below. If there is sufficient time I hope to present to you an example of what it can look like when the gap is small enough so that children can have the experiences in a state-of-the-art environment that increase the chances that they can grow, develop and learn worthwhile knowledge, skills, dispositions and feelings.

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1 Based on a lecture presented at the University of Louisiana, Lafayette, Louisiana May 20th, 2003.
1) The lasting effects of early experience

The evidence is now virtually irrefutable that any provisions for young children—whether within the home or outside of it—that is less than top quality represent missed opportunities to make substantial contributions to the rest of their lives.

Today, no one argues with that statement. Some may argue about what is meant by top quality; some argue about who is or should be responsible for the quality of provisions, and certainly many argue about who should pay for it.

But no one today with serious educational and social policy-making responsibility for a community or even a country all around the world would now argue against the proposition that the experiences of the early years of life have a powerful influence on all later ones.

Of particular interest currently is the increasing evidence that the effects of early childhood pedagogy may be different in the short term from in the long term. That is to say, what may appear to be most effective at the end of the preschool period may not prove to be so when the same children are followed for three, four or more years (Golbeck, 2001; Marcon, 2000). But I will return to this problem later.

2) The critical period of neurological development

We are meeting at a time of great interest in new research on the development of the neurological system, particularly the brain (Abbott, 1997; Sylwester, 1995).

As Rutter & Rutter (1992) point out, "As early as six months, the brain has reached half its final mature weight...Indeed, the brain reaches 90 per cent of its final weight by the age of five...[and is] most vulnerable to damage during this phase of rapid growth" (p. 37).

There is still considerable controversy about the specific pedagogical implications of this neurological research (Bailey et al, 2001). I want to
emphasize that thus far, no reports of the so-called "brain research" can
tell us which pedagogical approaches are most brain-compatible, even though
many have tried to suggest otherwise. This is too large to address today.
And I am sure you are familiar with this literature. I just want to emphasize
a few points.

(i) The human brain is much more a pattern-seeking than it is pattern-
receiving organ. Thus the early years should be marked by active
exploration in rich and safe environments. In other words, good quality
programs are those that provide frequent opportunity for children to
interact with each other, with adults and with their environments in
ways that will support their inborn quest for discerning cause-effect
relations, the sequences of events, the meanings of others' behavior,
and other patterns around them.

ii) I would like to add here that the most recent studies of
neurological development indicate that among the most important
kinds of experiences children need long before they enter traditional
school primary school classes are particular kinds of interactions with
significant adults (Blair, 2002).

Blair emphasizes the relationship between children's early experience
of what he refers to as "synchronous" interaction between a very
young child and its caretakers that consist of frequent sustained
sequences of interactions in which each participant's behavior is
"contingent" or related to the responses of the other.

Blair suggests that early and frequent experience of such series of
sustained interdependent interactions cause neurological links to be
developed, i.e., to grow, between the amygdala and the prefrontal
cortex on which subsequent abilities to attend, to carry out tasks
purposefully, and to engage in executive actions depend.

The implications of Blair's summary of this neurological growth cannot
be over-emphasized. It is not just a matter of the infant or young
child being 'stimulated.' What are important are sequences of
contingent continuous interactions. Thus our young children need
frequent opportunities for such sustained interactions with adults particularly, but with peers as well. (Mixed age groups would help also. But we cannot explore that issue at this time).

But, in principle, they have to have something to interact about! Something that matters to them, that is of interest and concern to them. Thus the content of the curriculum should allow for mindful rather than mindless activities.

I see in many classes of young children, too many of the activities are mindless. Too much cutting and pasting and calendar rituals, etc. (Lambs like to March)

3) All young children have lively minds

Third, it is clearly the case that children come to our early childhood programs with different amounts of exposure to books, stories, being read to, holding and using pencils, having their questions answered, having been encouraged to read signs, and other kinds of experiences that help them adapt and adjust to school and the academic exercises so typical of the school classroom. On the one hand, some of our children will have been read to practically since birth! Others will have rarely had encouragement to notice words or signs or to convey their own thoughts to those who care for them.

But all children come to school with lively minds, with the inborn disposition to make sense of their experience, of their observations, and of their feelings (See Katz, 1995, Ch. 3). I should add, to make the best sense they can of their experience

In other words, just because children have not been exposed at home to knowledge and skills related to literacy and numeracy does not mean that they don't have lively minds or that they lack intelligence and the basic intellectual dispositions that make their academic learning useful.

Young children compelled by circumstances to cope with the risks and vagaries of the streets or rough and tough neighborhoods often develop
powerful intellectual capacities to predict, hypothesize, and analyze the contingencies they face.

As long as children live in reasonably predictable environments marked by optimum (versus maximum or minimum) stimulation and challenge, their intellectual powers will grow—though they may not be acquiring any academic skills. However, for children trying to grow in environments that are chaotic, unresponsive, excessively irrational, or unpredictable, the most adaptive response would be to give up the natural inborn pattern-seeking behavior. This research then reminds us again to resist the temptation to attribute low expectations of intelligence or intellect to children who have not been exposed to early literacy and other school-related skills and knowledge.

I take this opportunity also to suggest that all of us keep in mind the distinction between academic and intellectual aspects of development and learning. Academic goals are served by presenting children with worksheets, drills, and other kinds of exercises designed to start them on basic literacy and numeracy skills. Academic tasks are small, disembedded or decontextualized items usually taught in isolation, requiring right answers, relying heavily on memory or rote learning versus understanding, and the regurgitation of specific items learned from formal instruction. In addition, academic tasks are devoted to learning skills rather than to deepening understanding. Furthermore, formal instruction in academic skills requires of the learner a passive-receptive rather than an active-expressive role; it requires the learner to be instructed rather than to construct ideas and hypotheses.

I do not wish to imply that academic tasks are never useful or appropriate. On the contrary, they have an important place in education—as children grow older. In other words, the inclusion of academic tasks in the curriculum is not merely an educational or philosophical issue, it is a developmental issue in that we must ask: At what point in children’s development is formal academic instruction and extensive work on exercises most appropriate?

Intellectual goals and activities, on the other hand, are focused on the life of the mind in its fullest sense, including its aesthetic, moral and spiritual sensibilities. The formal definition of the term intellectual emphasizes reasoning, hypothesizing about cause-effect relationships, the processes of
reflection, the development and analyses of observations and ideas, and other creative uses of the mind. In young children they include the dispositions to theorize and to predict reactions and events and to check predictions, to wonder, to question, to snoop and pry and find out things, and similar sometimes potentially dangerous or annoying behavior.

These intellectual dispositions are in-born in all human beings - granted, stronger in some than in others. Young children are natural born scientists, anthropologists, and linguists. Indeed, toddlers are often so eager to test their hypotheses and predictions that without appropriate supervision they are likely to inflict serious bodily harm on themselves! Their powerful disposition to explore their environments and everything in them frequently wears out their caretakers. It seems to me that the young child's motivation to acquire and to use academic skills is rarely considered by those who know little about young children but who frequently make major decisions about how they should be taught.

In terms of the state-of-the-art I suggest that a good quality environment for young children then is one in which children's intellectual dispositions are meaningfully and purposefully applied in investigations and in which early academic skills, such as literacy and numeracy skills - are acquired as children are motivated to apply them in meaningful and purposeful ways. In such cases, academic skills are mastered in the service of satisfying intellectual goals. I have frequently observed over the last dozen years or so how young children ask for help from their preschool and kindergarten teachers with how to represent their ideas and their findings with emerging literacy and numeracy skills when they are conducting in-depth investigations of phenomena around them worth knowing more about.

Again, if these dispositions are lost because they are not supported, strengthened and appreciated, or are otherwise undermined, they may be very difficult to reinstate later on. The most important in-born intellectual dispositions must be strengthened and supported by being used, rather than undermined by premature academic pressures. Thus it seems to me to be essential for teachers of young children to approach their work with this assumption firmly held, and to provide contexts for their safe and satisfying manifestation Thus such dispositions merit concern when considering the
long term consequences of their neglect rather than short-term gains accrued by the formal academic instruction increasingly offered to young children.

The relationship between the short term effects of academically oriented preschool pedagogies and their long term effects suggests that early introduction to academic exercises may produce positive effects in the short term - immediately following instruction - partly due to the way we measure the effects of preschool programs. It is obvious that the closer the test is to the curriculum or vice versa, the better the children will perform on them.

But when these children are followed over a period of three or more years, children who had early experience in more intellectually engaging curriculum approaches were more likely to do well in school than their peers who had early exposure to academic instruction (Golbeck, 2001; Marcon, 2000).

These results suggest that the important pedagogical question is not just how best to teach reading, but when and how to teach it so that the child will not only learn to read, but will have the life long disposition to be a reader! In other words, the issue isn't just whether a child can read, but whether the child (and later as adult) will read.

The ability to read is based on skill acquisition; the habit of reading is a product of acquiring the disposition to be a reader - for many children that disposition is more likely to develop if we introduce them to reading later rather than earlier. But that's another semester!

What is even more interesting is that the negative effects of early pressure for academic achievement are more severe for boys than for girls. It is not entirely clear why boys are more vulnerable than girls to excessive premature formal instruction. It has been suggested that the rate at which boys develop neurologically is known to be somewhat slower than the rate of girls. Eventually the boys catch up - around age 8. But the long-term negative effects of premature instruction in formal reading may be partially due to this neurological developmental difference.
However, my own hypothesis to account for the greater damage to boys of premature formal instruction is that girls generally suffer in silence better than boys! In most cultures and cultural groups, passivity is more easily tolerated and endured by females than males. And formal instruction, as I have already suggested, puts children in a passive receptive rather than active and assertive role.

Furthermore, the most vulnerable boys are probably those who are growing in cultures in which males - even young ones - are expected to be "agentic", i.e., to take action, initiative, to demonstrate strength and assertiveness, rather than the easier passive, receptive, submissive role of the female in the formal classroom and in the culture in general. However, this interpretation is only a hypothesis that needs further exploration.

Finally, I have addressed the intellectual aspects of the curriculum in contrast to the academic with the intention of emphasizing that not teaching the academic, formal drill-oriented curriculum is does not mean that children should spend large amounts of time just cutting and pasting in the fashion of what we refer to sometimes as "refrigerator art." The chalk-and-talk and the cut-and-paste approaches to early childhood education are not the only two options. The far better option is to address children's intellectual development by engaging them in investigations of worthwhile topics under the guidance of their teachers - what we refer to as the Project Approach (Katz & Chard, 1995; Helm & Katz, 2001). This approach can - and indeed, has been adopted without increased expenses, and even in large classes under less than optimal physical conditions. And all children live in environments in which there are worthwhile topics to investigate (Helm & Katz, 2001).

4) The critical period in social development

Evidence has been accumulating for more than twenty-five years--primarily in North America--that unless children achieve minimal social competence by about the age of six, plus or minus a half a year, the child is at risk for the rest of his or her life (See Katz & McClellan, 1997, Ladd & Birch, 1999, Coplan, et.a., 2001, ).
In this aspect of development, the critical period of the first six years is not due to any limitations of the brain and its development. Rather, it is because of what is known as the recursive cycle, namely, that whatever pattern of social behavior a child has, the chances are that others will react to the child so that the pattern will be strengthened.

If a child is friendly and approachable, others will welcome his or her company, engage and interact with the child, from which the child will gain confidence as a social participant, and due to which opportunities to polish available skills and acquire new ones will increase. In this way a child who is easy to like becomes more likable--in a positive recursive cycle.

Similarly, a child who is difficult to approach, or to interact with, is often avoided by others, which in turn limits his or her opportunities to polish and practice already available social skills and to acquire new ones, and therefore the child becomes less likable, and often becomes alienated from the peer group. Similarly, children who are aggressive typically approach others so as to be rejected or avoided by them, and they tend to return to interaction and repeat the rejected or avoided behavior more intensely, and gradually become excluded from peer interaction and opportunities to improve their skills and to learn new ones--in a negative cycle.

It is important to note then, that for likable and unlikable children, their approach to (or withdrawal from) others occurs in a recursive cycle that feeds on itself, and that the child (in the negative cycle) cannot break it by himself or herself. Even adults with social difficulties cannot usually break a negative cycle without the help of very good friends or counselors, due mainly to the fact that social interaction is and should be largely spontaneous and un-self-conscious behavior. We now know a lot about how to help young children who are caught in a negative cycle. But we also know that such help must be offered early! The earlier the better, and the more likely to be effective.

A child of three- or four-years-old can be helped in a matter of weeks. But if we wait until a child is eight- or eleven-years-old or older, we will need the whole state mental health agency--and it still may be too late to break the negative cycle. By the time children reach the age of about ten, they have been accumulating so much first-hand evidence of their un-likeability deep
inside of them that it is hard for them to believe they could be liked by anyone whose acceptance and liking they would value.

There is also some reason to suspect that children who are rejected by their peers, early and repeatedly, eventually find each other, and that they get from each other a sense of belonging and intimacy from each other based on their shared bitterness and hostility to the rest of the community (Dishion, et al. 1991).

Such groups then have a deep and vested interest in avoiding positive relationships with those they perceive to be “the out-group.” On the contrary, their deep feelings of belonging to their “in-group: are endangered by perceiving their adversaries in a positive light. As such, resolving conflicts threatens their sense of intimacy with the peers in their in-group. It was surprising to me to learn that research shows that children as young as age four children identify with groups they are “in” and groups that are “out” (Yee and Brown (1992). In the later adolescent years such groups of disaffected youth whose sense of “in group” belonging is based on shared bitterness are analogous to having time bombs in our own back yards. The deep and intense emotions at work in these cases are most likely developed very early in life and can be the source of serious social damage later on.

I have suggested that today we know more than ever before about how to help such children. What we know also is that teachers cannot provide that help to them unless the teacher/pupil ratio is low enough to permit frequent individualized interaction between children and adults, and close monitoring of social engagement in the classroom. Indeed, I would suggest that any teacher who works with children six-years-old or under should have at minimum, a full-time assistant—for this, as well as for other reasons. This appears to many to be an expensive proposal. But current evidence suggests that we all pay later for neglect of these problems in the early years; we pay not only in terms of the costs to communities of dealing with social dysfunction, but also in terms of the pain and suffering for all involved.

Of course, small class size and good teacher/pupil ratios in and of themselves do not guarantee that teachers can help children overcome all social difficulties; but large class sizes virtually make it impossible to do so. Our teachers need a variety of insights and skills to help them cope with
such children. And some children cannot be helped by teachers, no matter how knowledgeable they are; they need the services of specialists outside of the classroom environment.

5) **The development of communicative competence.**

In addition, all of us concerned with education in the early years are also concerned about children's language development, best thought of as communicative competence. This is one of the areas of development that must be well on its way before school.

It is increasingly clear that for the young to develop such competence, several qualities of the environment are required.

- First, young children acquire communicative competence from conversation, not just from exposure to language in a passive way. Conversation is a very special type of interaction in which each participant's contribution is contingent on (or related to) the contribution of the other in a sequence of content-contingent interactions, very much like the synchronous interactions Blair (2002) has advocated.

- Second, such conversational interactions are more likely to occur in very small groups than in large groups. In large groups the teacher spends a lot of time reminding children in the group that it is not yet their turn to speak!

- Third, conversations are more likely to occur when teachers encourage children to respond to each other rather than just to them. Encouraging inter-child communication is far too rare in our preschool, kindergarten and primary classes, and teachers seem to need some help learning how to encourage it.

- Fourth, children who have difficulty forming peer relationships lose opportunities to practice and polish their verbal skills, and because their verbal skills are not well developed, they tend to have greater difficulty forming peer relationships. Again, a recursive cycle: children who are articulate when communicating with peers make relationships
more easily, and because they do, they have increasing opportunities to improve their communication skills, and their social competence, in a positive cycle.

- Fifth, and often overlooked: for conversation to occur, there must be something to talk about! Something that matters to the talkers; something of interest and of significance to them. There cannot be real conversation without content.

- The content does not necessarily have to be fun or amusing - but something that is important and meaningful to them. This is another reason why I strongly urge teachers of young children to involve them in investigations of things worth knowing about - in what we call "projects" (Katz & Chard, 2000). There is far too much emphasis on fun for young children, and I believe it is due to the fact that we under-estimate how much satisfaction young children gain for hard work, trying to find things out, over-coming difficulties and set-backs, being challenged.

6) Development and Cultural Identity

One of the most complex challenges all of us face in our multicultural societies in our commitment to ensuring a good quality environment for our young ones is to support the early development of cultural identity--a sense of belonging to a community--one that is a source of values, norms, support, strength, inspiration, and pride, and to work with their parents so as to respond to their cultural commitments. This constitutes a real challenge in our country (and in others), and for many reasons. It is a complex matter - not simply one of good will or of teaching and learning about foods, festivals, flags, and fashions.

I find it useful to make a distinction between a child's culture and a child's heritage. The child's culture is the experience she or he is actually having on a day-to-day basis. It may be quite different from the childhoods of their parents and grand-parents. On the other hand, their heritage is about the customs, beliefs and patterns of behavior of the child's predecessors or even ancestors which are worthy of knowing about and understanding, but probably not during the preschool period.
We have to bear in mind that cultures constantly change; they always have done, and always will. Often the changes cause internal within-culture contradictions. Note also that the sages of the ages have always complained about the behavior of the youth, especially about their disrespect for their elders, and have claimed that the young do with impunity what they themselves never did at their ages! The fact that this lament goes back more than two thousand years suggests that it may be true: that for each generation, the range of permissible behavior steadily widens—-for better or worse!

Furthermore, it is a good idea to remember that culture is largely about aspects of our experience that we are not aware of until somebody or something violates or disturbs them. We have to bear in mind also, that just because people belong to the same culture—in the traditional sense—does not mean they all agree with each other about how best to raise or to teach children, or even about what to teach them. The issues here are complex and probably more about prejudice and bias than about culture per se. Prejudice, or ethnocentrism seems to me to be developmentally inevitable in the early years and the problem for us all is how to help our children to out-grow it.

Conclusion

I suggest the best way to ensure good quality environments in which all of our children can develop and learn is by focusing our collective and individual energies on the quality of the day-to-day interactions we have with children so that those interactions are as rich, interesting, engaging, satisfying, and meaningful as we can make them.

Helping our students learn how to teach in this way is a very serious challenge for all of us. With the high level of “teacher bashing” prevalent in the wider culture and the policy pundits today, I am very afraid that the kinds of students who would most likely be able to learn to offer such rich and engaging experiences for children will choose other fields in which to employ their talents.
References


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